

Claims 1-12 (canceled)

13. (currently amended) A method for transferring N-acetyl-D-glucosamine from a donor substrate to an acceptor substrate through  $\beta$ 1,3-linkage, wherein " $\beta$ " represents an anomer assuming a cis configuration, of anomers of glycosidic linkage at position 1 of the sugar ring, the method comprising reacting the donor substrate and the acceptor substrate in the presence of [[with]] a  $\beta$ 1,3-N-acetyl-D-glucosaminyltransferase protein, wherein the protein comprises the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 16.

14. (currently amended) An isolated  $\beta$ 1,3-N-acetyl-D-glucosaminyltransferase protein comprising the amino acid sequence of SEQ ID NO: 2 or SEQ ID NO: 16, wherein the protein has the following properties (a) to (c):

- (a) acceptor substrate specificity: the protein transfers GlcNAc from UDP-GlcNAc to an acceptor substrate having an oligosaccharide residue in a quadruple stranded form at the nonreducing end of an N-linked oligosaccharide through a  $\beta$ 1,3 glycosidic linkage and synthesizes an oligosaccharide wherein "GlcNAc" represents an N-acetyl-D-glucosamine residue, and " $\beta$ " represents an anomer assuming a cis configuration, of anomers of glycosidic linkage at position 1 of the sugar ring;
- (b) reaction pH: the protein has a high activity at or around neutral; and
- (c) divalent ion requirement: the activity is enhanced in the presence of at least  $Mn^{2+}$  or  $Ge^{2+}$ .

Claims 15-30 (canceled)

31. (previously presented) The method according to Claim 13, wherein the protein comprises the amino acid sequence of SEQ ID NO: 2.

32. (previously presented) The method according to Claim 13, wherein the protein comprises the amino acid sequence of SEQ ID NO: 16.

33. (previously presented) The protein of Claim 14 comprising the amino acid sequence of SEQ ID NO: 2.

34. (previously presented) The protein of Claim 14 comprising the amino acid sequence of SEQ ID NO: 16.